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EXAMINER

BAKHTIARI, NIKI

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHUNPEI YAMAZAKI, SATOHIRO OKAMOTO, and
KAZUO NISHI

Appeal 2015-002429
Application 12/793,294
Technology Center 1700

Before KAREN M. HASTINGS, CHRISTOPHER L. OGDEN, and
MONTÉ T. SQUIRE, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ seek our review under 35 U.S.C. § 134(a) of a decision of the Primary Examiner to reject claims 1, 4–7, 10–13 and 15–17 under 35 U.S.C. § 103(a) over the combined prior art of at least Yokota (US 5,071,490 issued Dec. 10, 1991), Takeyama (US 2004/0144420 A1 published July 29, 2004), and Fischer (US 4,199,894 issued Apr. 29, 1980).² We have jurisdiction under 35 U.S.C. § 6. We AFFIRM.

¹ According to the Appellants, the real party in interest is Semiconductor Energy Laboratory Co., Ltd. (App. Br. 1).

² The Examiner applied Winkeler in addition to the references applied to claim 1 in the rejection of claims 7 and 10–12. In response, however, Appellants rely upon the same arguments as made for claim 1 (App. Br. 5).

Claim 1 is illustrative of the claimed subject matter (emphasis added):

1. A photoelectric conversion device comprising:
 - a first cell having a photoelectric conversion function comprising:
 - a first conductive film;
 - a first photoelectric conversion layer over the first conductive film; and
 - a second conductive film over the first photoelectric conversion layer;
 - a second cell having a photoelectric conversion function over the first cell, the second cell comprising:
 - a third conductive film;
 - a second photoelectric conversion layer over the third conductive film; and
 - a fourth conductive film over the second photo electric conversion layer; and
 - a structure body including a resin and conductive particles between the first cell and the second cell, wherein the structure body is configured to fix the second conductive film of the first cell and the third conductive film of the second cell to each other and to electrically connect the second conductive film of the first cell and the third conductive film of the second cell to each other through the conductive particles,
wherein the first cell and the second cell are connected in series.

App. Br. 6 (Claims Appendix).

Appellants' arguments are directed to the limitation "wherein the first cell and the second cell are connected in series", which is common to each of independent claims 1, 7 and 13. Accordingly, all the claims stand or fall together, even those claims separately rejected (*e.g.*, App. Br. 5).

ANALYSIS

Upon consideration of the appeal record, including the Appellants' position in this appeal as set forth on pages 3–5 of the Appeal Brief (as well as pages 1–3 of the Reply Brief filed December 15, 2014), we affirm the

Examiner's rejections for the reasons stated by the Examiner (Final Office Action mailed November 25, 2013, at 2–5; Examiner's Answer mailed October 17, 2014 at 3–9). We add the following primarily for emphasis.

Appellants' sole argument is that there would have been no reason or motivation to modify Yokota to connect the first and second cells in series because Yokota's invention involves connecting the cells in parallel in order to minimize the thickness of the lower cell layer to overcome disadvantages in the prior art which connected the cells in series (*e.g.*, App. Br. 4; Reply Br. 1 (Appellants state that modifying Yokota's cell to be in series “directly contradicts” the intended principle of operation)). Appellants' allegation is essentially that Yokota teaches away from the claimed invention.

These arguments fail to consider the applied prior art as a whole. Whether a reference teaches away from a claimed invention is a question of fact. *In re Harris*, 409 F.3d 1339, 1341 (Fed. Cir. 2005). “The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.” *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000).

As aptly pointed out by the Examiner, Fischer teaches advantages of parallel and/or series connections of solar cells (Fischer, col. 2, ll. 12–23; Ans. 5 and 11). Likewise, Yokota explicitly teaches that the prior art included solar cells connected in series (col. 2, ll. 30–40). *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (all disclosures of the prior art, including unpreferred embodiments, must be considered).

Thus, Appellants have not shown reversible error in the Examiner's determination that one of ordinary skill in the art, using no more than ordinary creativity, would have used a series connection as exemplified in Fischer for the cells of the Yokota/Takeyama combination in order to obtain a known advantage of a series connection, even if at the expense of a benefit of a parallel connection (*see also*, Ans. 11 (pointing out that parallel and/or series connections are a known limited set of electrical interconnections an artisan may select). Notably, the claims on appeal do not in any way limit the thickness of the cell layers, which is an underlying benefit of Yokota's parallel connection (*cf.*, Yokota col 2, ll. 35–40 to col. 3, ll. 35–40). *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). *See also*, *In re Keller*, 642 F.2d 413, 425–26 (CCPA 1981) (“The test for obviousness . . . is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”); *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”).

Thus, all of the Examiner's § 103 rejections on appeal are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED